



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/553,933

10/20/2005

Benjamin Geller

37514

6137

67801

7590

01/25/2011

MARTIN D. MOYNIHAN d/b/a PRTSI, INC.

P.O. BOX 16446

ARLINGTON, VA 22215

EXAMINER

GUPTA, VANI

ART UNIT

PAPER NUMBER

3777

MAIL DATE

DELIVERY MODE

01/25/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/553,933	Applicant(s) GELLER ET AL.	
	Examiner VANI GUPTA	Art Unit 3777	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 35-40, 45-50, 53 and 54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 35-40, 45-50, 53 and 54 is/are rejected.
- 7) ☒ Claim(s) 55 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Request for Reconsideration

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. *Claims 1 – 7, 35 – 37, 39, 40, 45 – 48, and 51 – 54 are rejected under 35 U.S.C. 102(b) as being anticipated by Chen et al. (US 4,579,123).*

Regarding Claim 1, Chen et al. (hereinafter *Chen*) discloses an apparatus for the ultrasonic treatment of tissue, including:

a housing (*fig. 1B*) having

(a) a space therewithin (*2*) and an opening (*cup, (2)*) adapted for placement against the tissue (*col. 2, ll. 20 – 50*), the housing being adapted (*203*) for introducing liquid therein;

(b) a receptacle (*16*) adapted to receive and engage an ultrasonic transducer (*40*);
and

(c) a flat interface (*6*) suitable for separating the ultrasonic transducer from the liquid while ultrasonically coupling therebetween (*col. 4, ll. 14 – 17*).

Art Unit: 3777

Regarding claims 2 and 3, Chen suggests the apparatus according to claim 1, wherein the opening comprises a sealing element (22') that provides a seal at the tissue, and wherein the seal includes a flexible element (*col. 1, ll. 45 – 46*).

Regarding Claim 4 and 5, Chen suggests the apparatus according to claim 2, wherein the seal includes an outwardly protruding portion that is placed to contact the tissue surface (*figs. 1B and 2, (22, 22')*.)

Regarding claims 6 and 7, Chen suggests an apparatus according to claim 3, wherein the seal includes an inwardly protruding portion that is placed to contact the tissue surface due to the fact that Chen suggests that the seal conforms to the surface of patient's body when the device is pressed onto the patient (*col. 1, ll. 46 – 50*). Thus, the seal would include an inwardly protruding portion when the device is placed in contact with the tissue surface.

Regarding Claim 36, Chen suggests an apparatus according to claim 1, wherein the interface is part of the housing (*see rejection of Claim 1; figs. 1B, 1E, 2*).

Regarding Claim 37, Chen suggests an apparatus according to claim 1, wherein the interface comprises an elastic barrier (*figs. 2 and 1E; wherein the interface is elastic or flexible enough to conform to the shape of the transducer*).

Regarding Claim 39, Chen suggests an apparatus according to claim 1, wherein at least a portion of the interface acoustically matches the liquid (*col. 1, ll. 43 – 45 and 53 – 55*) - since there is also a hood acoustical coupling between the transducer and liquid - to an extent so that is it is capable of preventing cavitation at the interface between the liquid and the interface.

Art Unit: 3777

Regarding claim 51, Chen suggests an apparatus according to claim 1, wherein the apparatus comprises an ultrasonic transducer (*col. 1, ll. 36 – 50; col. 3, ll. 42 – 46; figs. 2 and 3, (40)*).

Regarding Claim 35, Chen suggests an apparatus according to claim 51, wherein the ultrasonic transducer includes an ultrasonic energy concentrator ("*lens*," *(43)*).

Regarding Claim 40, Chen suggests an apparatus according to claim 51, wherein the housing is capable of being disposable or separately sterilizable and reusing the ultrasound transducer source does not require sterilization thereof, since the transducer is attachable to or separable from the housing (*col. 4, ll. 14 – 39*).

Regarding Claim 45, Chen suggests an apparatus according to claim 1, wherein the interface is made of an elastomer (*see rejection of Claim 37*).

Regarding Claim 46, Chen suggests an apparatus according to claim 1, wherein at least the entire housing is made of an elastomeric (i.e., "flexible") material (*col. 1, ll. 44 – 46 and 64 – 68*).

Regarding Claim 48, Chen suggests an apparatus according to claim 1, wherein the apparatus is filled with liquid (*fig. 1B, (23)*).

Regarding Claim 47, Chen suggest an apparatus according to claim 48, wherein the interface has acoustic properties similar to the liquid, as the liquid serves as a coupling agent between the interface and tissue surface during treatment (*see rejection of Claim 39*).

Regarding Claim 50, Chen suggests the apparatus wherein the liquid *(23)* is capable of comprises medication.

Art Unit: 3777

Regarding Claim 52, Chen suggest an apparatus according to claim 51, wherein the transducer is capable of transmitting into liquid introduced into the housing ultrasonic energy in an amount that causes desired cavitation at the surface of the tissue (*col. 3, ll. 36 – 38*).

Regarding claims 53 and 54, Chen suggests an apparatus according to claim 1, further comprising a liquid inlet (34) for introducing liquid (23) into and removing liquid from the housing (*col. 2, line 62 – col. 3, line 23*).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. ***Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen as applied to claim 37 above, and further in view of Glossack et al. (US 5,585,565).***

Art Unit: 3777

Regarding claim 38, Chen teaches each and every limitation of the claim, as discussed above in reference to claim 37.

However, Chen does not teach an apparatus wherein the elastic barrier comprises polyurethane.

Nonetheless, Glossack et al. teaches an apparatus, wherein the elastic barrier comprises polyurethane (*figs. 1, 2, and 5; col. 3, ll. 6 – 26*).

Accordingly, it would have been obvious to one of ordinary skill in the art, having the teachings of Chen before one *at the time the invention was made*, to modify the ultrasound-based device with elastomer transducer-barrier of Chen to include the polyurethane-based material used as a ultrasound transducer-barrier of Glossack et al. so that transducer becomes “water-impervious” to the liquid.

4. **Claim 49 rejected under 35 U.S.C. 103(a) as being unpatentable over Chen as applied to claim 48 above, and further in view of Rosenberg (US 7,128,719 B2).**

Regarding claim 49, Chen teaches each and every limitation of the claim, as discussed above in reference to claim 48.

However, Chen does not teach an apparatus, wherein the liquid is one of a saline or a detergent.

Nonetheless, Rosenberg teaches filling a ultrasound-based treatment chamber with saline (*col. 8, ll. 45 – 47*).

Accordingly, it would have been obvious to one of ordinary skill in the art, having the teachings of Chen before one *at the time the invention was made*, to modify the non-descript liquid of Chen with saline-based liquid of Rosenberg for filling an ultrasound-transducer

Art Unit: 3777

treatment device so that one can obtain maximum results with application of the ultrasound energy (*col. 9, ll. 4 - 13*).

Allowable Subject Matter

5. ***Claim 55 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.***

Regarding Claim 55, Chen suggests all the features as explained above. However, Chen does not reasonably suggest, even by means of an obviousness (modification) rejection, the subject matter of this claim including “a liquid inlet and a liquid outlet placed in the housing on opposite sides of an area of the skin to be treated, so that the liquid flows across the area.”

Response to Arguments

6. Applicant’s arguments, see pp. 7 – 9, filed January 10, 2011, with respect to the rejection(s) of claim(s) 1-7, 35-40,45-50 and 53-55 under Iger et al. (US 6,206,843) with respect to the flat interface have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Chen et al. (US 4,579,123).

7. Applicant's remaining arguments with respect to aforementioned claims have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 3777

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VANI GUPTA whose telephone number is (571)270-5042. The examiner can normally be reached on Monday - Thursday (8:30 am - 6:00 pm; EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert (Tse) Chen can be reached on 571-272-3672. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/V. G./
Examiner, Art Unit 3777

/Eric F Winakur/
Primary Examiner, Art Unit 3777